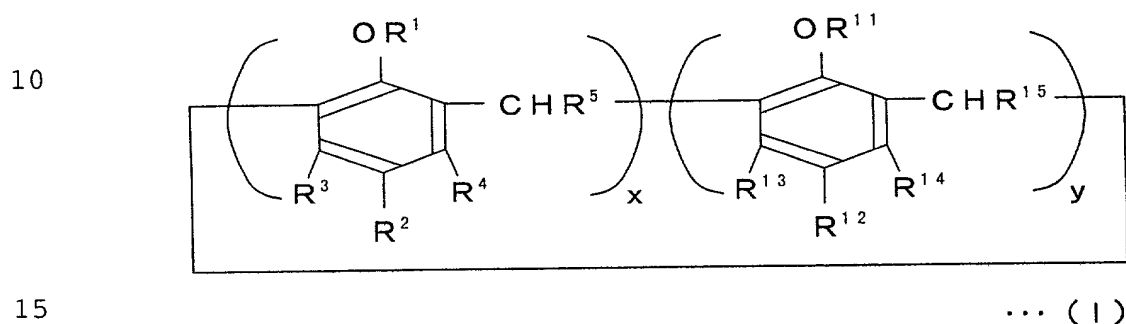


CLAIMS

1. A color imaging toner, comprising at least a binder resin and a colorant, which is used in an imaging process employing a photofixing system, said imaging color toner further comprising a combination of:

a calixarene compound represented by the following formula (I):



wherein R¹, R², R³, R⁴ and R⁵ may be the same or different and each represents a hydrogen atom, an alkyl group, a group of $-(CH_2)_mCOOR^{10}$ in which R¹⁰ represents a hydrogen atom or an alkyl group, and m represents a positive integer, a group of $-N(R^7)_2$ in which R⁷ represents an oxygen atom, a hydrogen atom or an alkyl group, a group of $-SO_3R^8$ in which R⁸ represents a hydrogen atom or an alkyl group, an aryl group or a group of $-Si(CH_3)_3$,

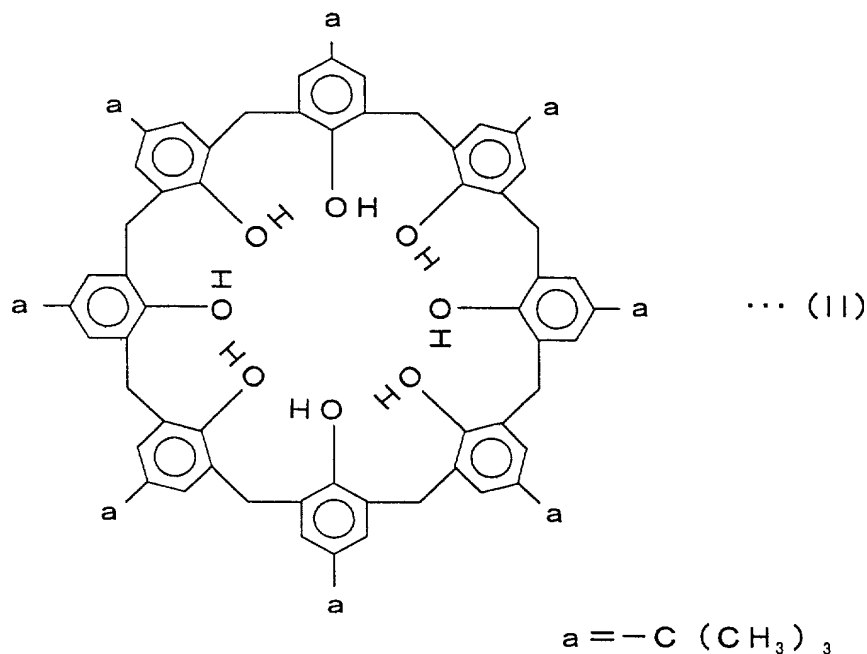
R¹¹, R¹², R¹³, R¹⁴ and R¹⁵ may be the same or different and each represents a hydrogen atom, an alkyl group, a group of $-(CH_2)_mCOOR^{20}$ in which R²⁰ represents a hydrogen atom or an alkyl group, and m represents a positive integer, a group of $-N(R^{17})_2$ in which R¹⁷ represents an oxygen atom, a hydrogen atom or an alkyl group, a group of $-SO_3R^{18}$ in which R¹⁸ represents a hydrogen atom or an alkyl group, an aryl group or a group of $-Si(CH_3)_3$, and

x and y each represents 0 or a positive integer, and

an infrared absorbing compound which shows a light absorption peak at a wavelength ranging from 700

to 1000 nm.

2. The color imaging toner according to claim 1, wherein the calixarene compound is a compound of the following formula (II):



3. The color imaging toner according to claim 1 or 2, wherein the infrared absorbing compound is phthalocyanine, naphthalocyanine or a mixture thereof.

4. The color imaging toner according to claim 1 or 2, wherein 100 parts by weight of a toner is mixed with 0.1 to 10 parts by weight of the calixarene compound and 0.01 to 5 parts by weight of the infrared absorbing compound.

5. The color imaging toner according to claim 1 or 2, wherein the photofixing system is used at a light emission energy density ranging from 1.0 to 6.0 J/cm².

6. The color imaging toner according to claim 1 or 2, wherein the color toner is used in an electrographic imaging process employing a photofixing system.

7. A method of forming a color image on a recording medium by means of an electrophotographic system which comprises the steps of forming an

electrostatic latent image by image exposure, visualizing the electrostatic latent image by development, transferring the visualized image onto the recording medium and fixing the transferred image, wherein

5 a developing agent used in the step of developing the electrostatic latent image contains a color toner comprising at least a binder resin and a colorant and further comprising a combination of:

10 a calixarene compound represented by the above formula (I) wherein R^1 , R^2 , R^3 , R^4 and R^5 , R^{11} , R^{12} , R^{13} , R^{14} and R^{15} , and x and y are as defined above, and

an infrared absorbing compound which shows a light absorption peak at a wavelength ranging from 700 to 1000 nm; and

15 a photofixing system is used at a light emission energy density ranging from 1.0 to 6.0 J/cm² in the step of fixing the transferred image after transferring the image visualized by using the developing agent onto the recording medium.

20 8. The color image forming method according to claim 7, wherein the calixarene compound is a compound of the above formula (II).

9. The color image forming method according to claim 7 or 8, wherein the infrared absorbing compound is 25 phthalocyanine, naphthalocyanine or a mixture thereof.

10. The color image forming method according to claim 7 or 8, wherein 100 parts by weight of a toner is mixed with 0.1 to 10 parts by weight of the calixarene compound and 0.01 to 5 parts by weight of the infrared 30 absorbing compound.

11. An apparatus for forming a color image on a recording medium by means of an electrophotographic system, comprising an image exposing device for forming an electrostatic latent image, a developing device for 35 visualizing the electrostatic latent image, an image transferring device for transferring the visualized image onto the recording medium, and an image fixing device for

fixing the transferred image onto the recording medium,
wherein

the developing device is loaded with a
developing agent which contains a color toner comprising
5 at least a binder resin and a colorant and further
comprising a combination of:

a calixarene compound represented by the
above formula (I) wherein R^1 , R^2 , R^3 , R^4 and R^5 , R^{11} , R^{12} ,
10 R^{13} , R^{14} and R^{15} , and x and y are as defined above, and

an infrared absorbing compound which shows
a light absorption peak at a wavelength ranging from 700
to 1000 nm; and

the image fixing device is provided with a
photofixing device having a light emission energy density
15 ranging from 1.0 to 6.0 J/cm².

12. The color image forming apparatus according to
claim 11, wherein the calixarene compound is a compound
of the above formula (II).

13. The color image forming apparatus according to
20 claim 11 or 12, wherein the infrared absorbing compound
is phthalocyanine, naphthalocyanine or a mixture thereof.

14. The color image forming apparatus according to
claim 11 or 12, wherein 100 parts by weight of a toner is
mixed with 0.1 to 10 parts by weight of the calixarene
25 compound and 0.01 to 5 parts by weight of the infrared
absorbing compound.